

calculation constant is based on a 6-year average, rather than one maximum hourly values.

For Unit 1 the resulting constant was 36.0. For Unit 2 the resulting constant was 40.5. Using these constants for each LOS Unit respectively, the 1974-1979 CEMS back calculated maximum hourly baseline emission rates were developed using the AP-42 equations.

These data shows that there has been little if any increase in CEMS-based maximum hourly emission rates since 1976-1977. Moreover, as can be seen from Figures 6 and 7 and Exhibit I, the emission rates developed for 1976-77 were abnormally low compared to the more representative rates for 1978-79. If 1978-79 emissions were utilized as representative of normal baseline operations, there would be no increment-consuming emissions from LOS, because current emissions are lower than those in 1978-79.

Question 3. This concerns the issue whether the baseline years of 1976-77 are representative of normal operation of Leland Olds Station. As noted earlier in describing the history and design of LOS and its base load and maximum capacity, and in Section III above, 1976-77 SO₂ emissions are not representative of normal operation of LOS 1 & 2. See, e.g., Figures 8 and 9 which reflect annual SO₂ emissions excerpted from NDDH files.

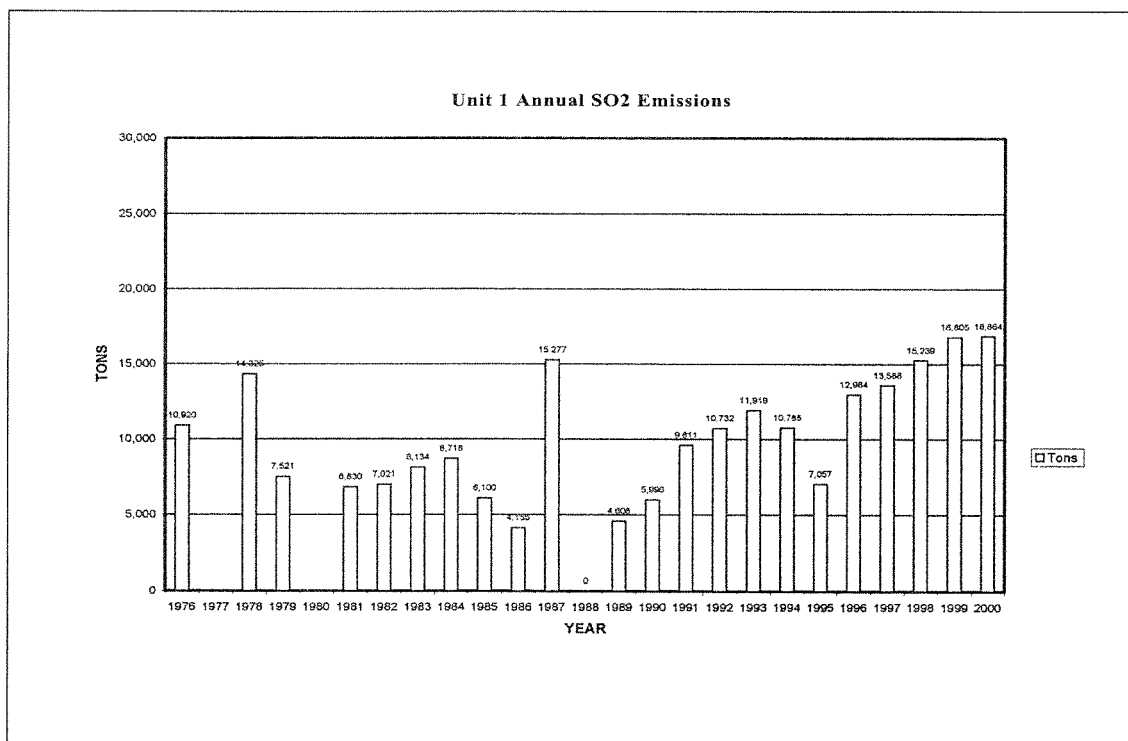


Figure 8

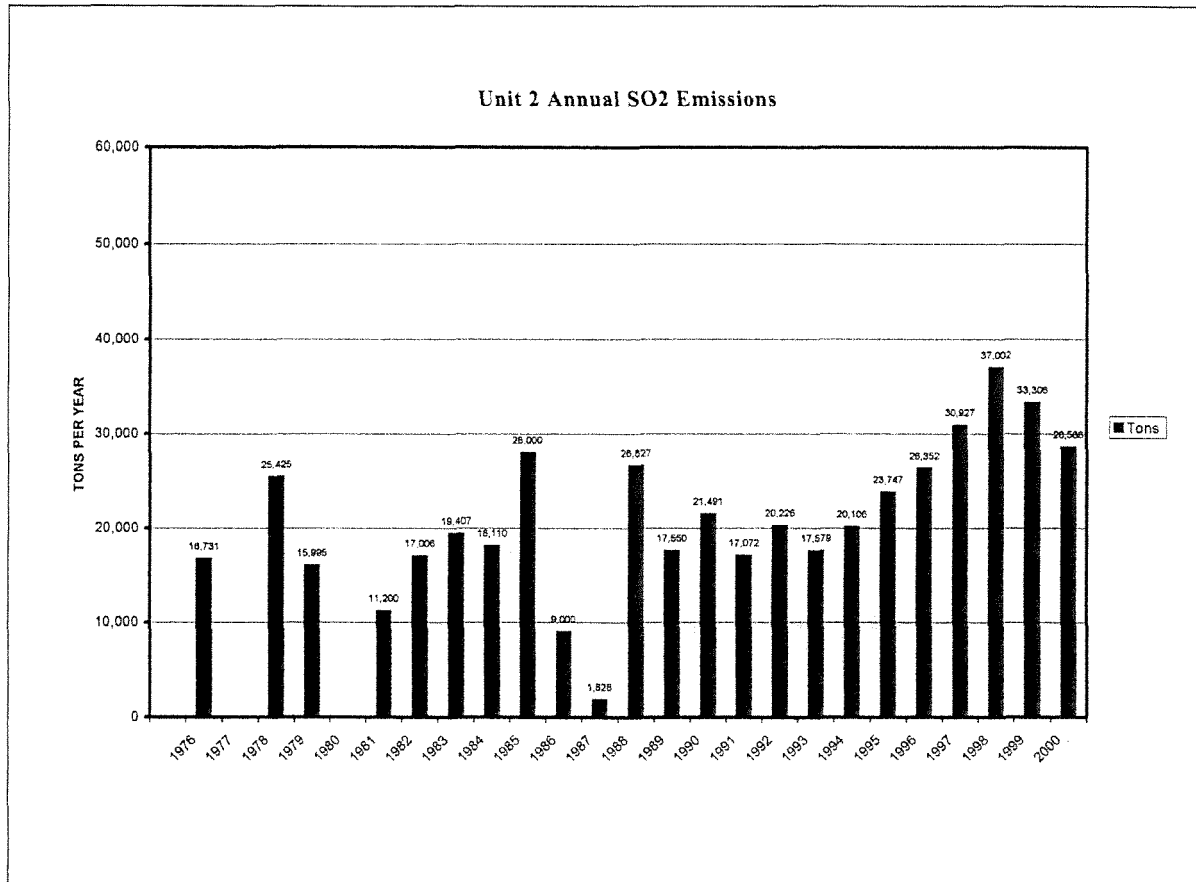


Figure 9

As shown by those figures, the years 1976 and 1977 are not representative. Indeed, there are no two years that are evidently representative or characteristic of the source. In the last few years LOS Units 1 & 2 have operated at levels which more nearly approach the level of operation for which LOS was designed and permitted, but the plant has not reached its designed and permitted level of operation. Emissions during the two-year period 1976-1977 were anomalously low, on the order of 40 percent of the more representative operation that has taken place in the last several years.

Basin Electric has also compiled the sulfur analysis of the coal consumed at LOS and the annual tonnage of the coal consumed. These are shown for the years 1976-2000 in Figures 10, 11, 12, and 13.

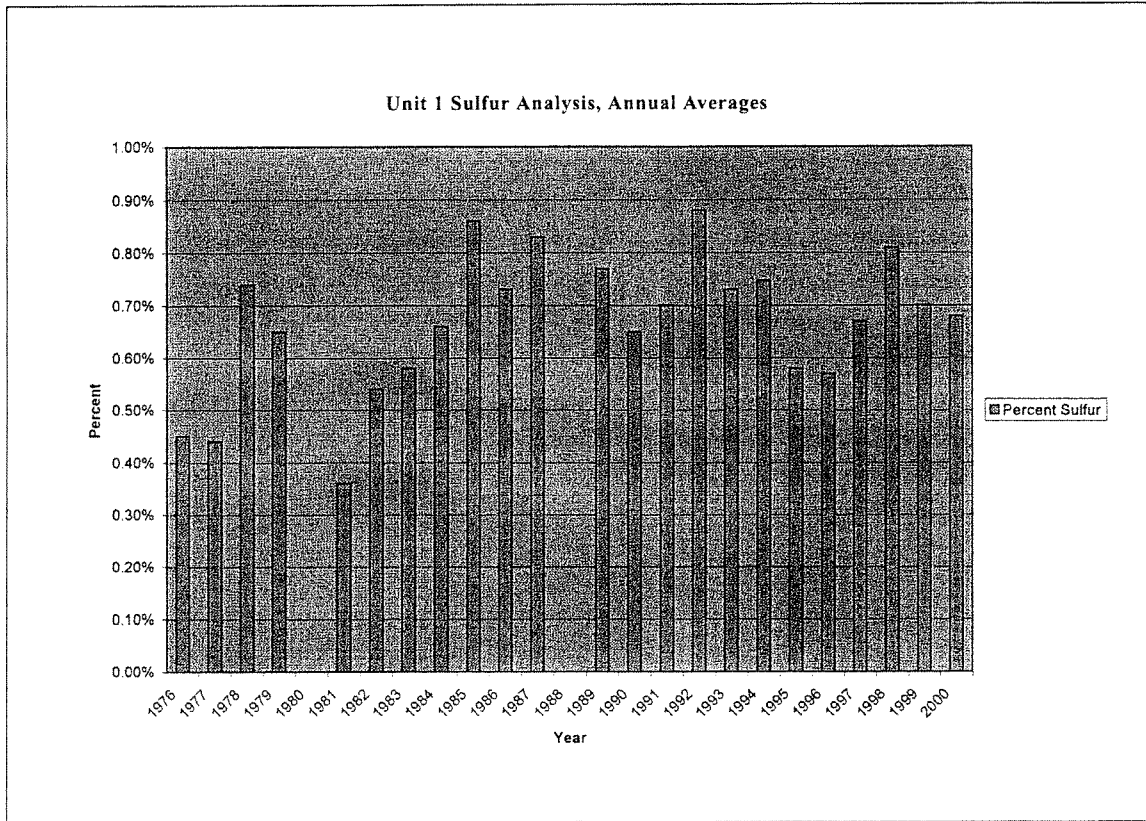


Figure 10

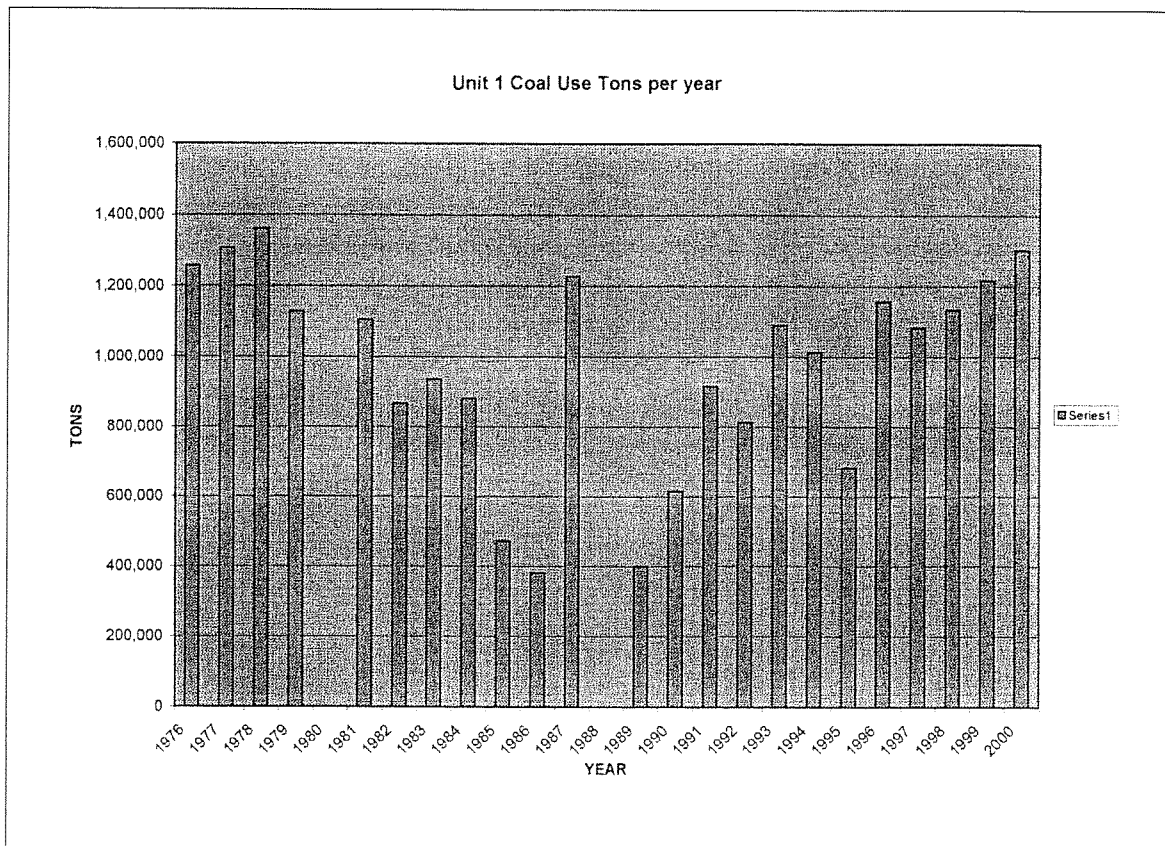


Figure 11

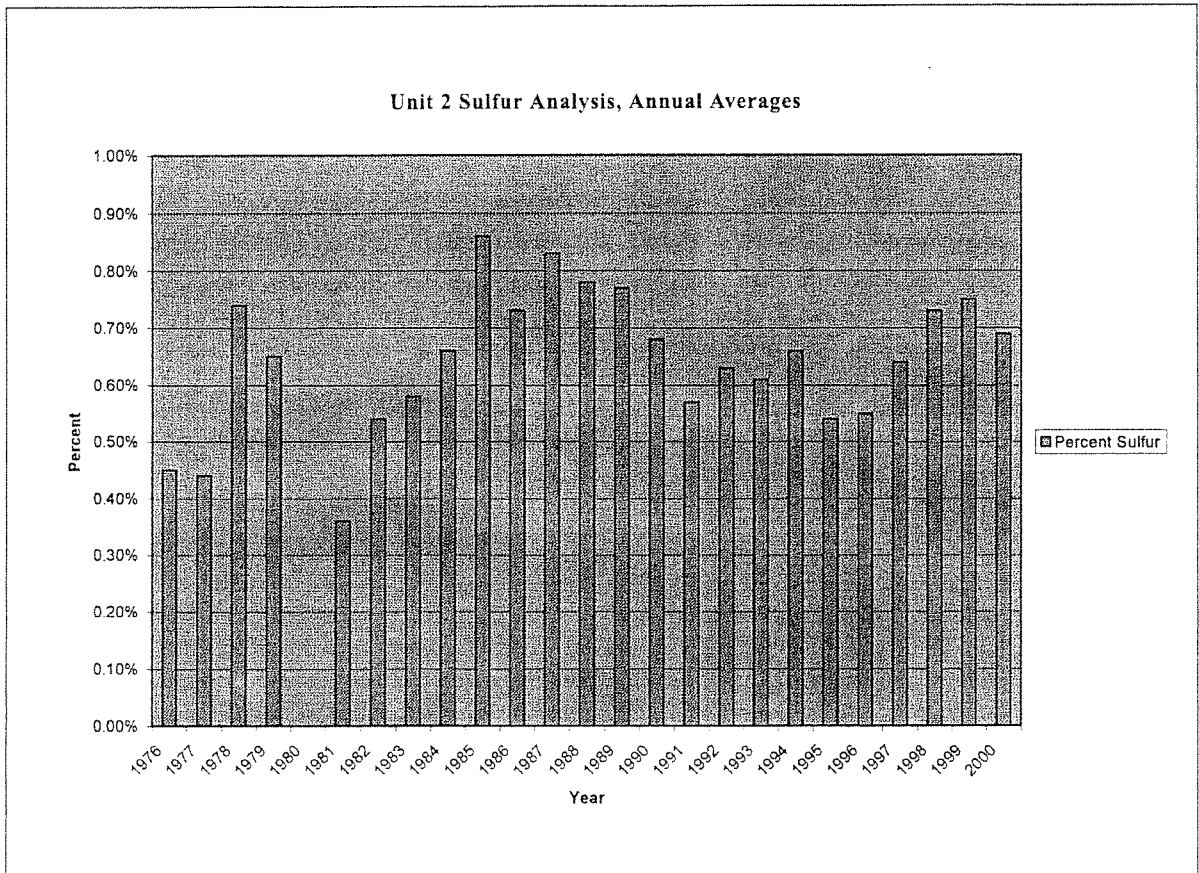


Figure 12

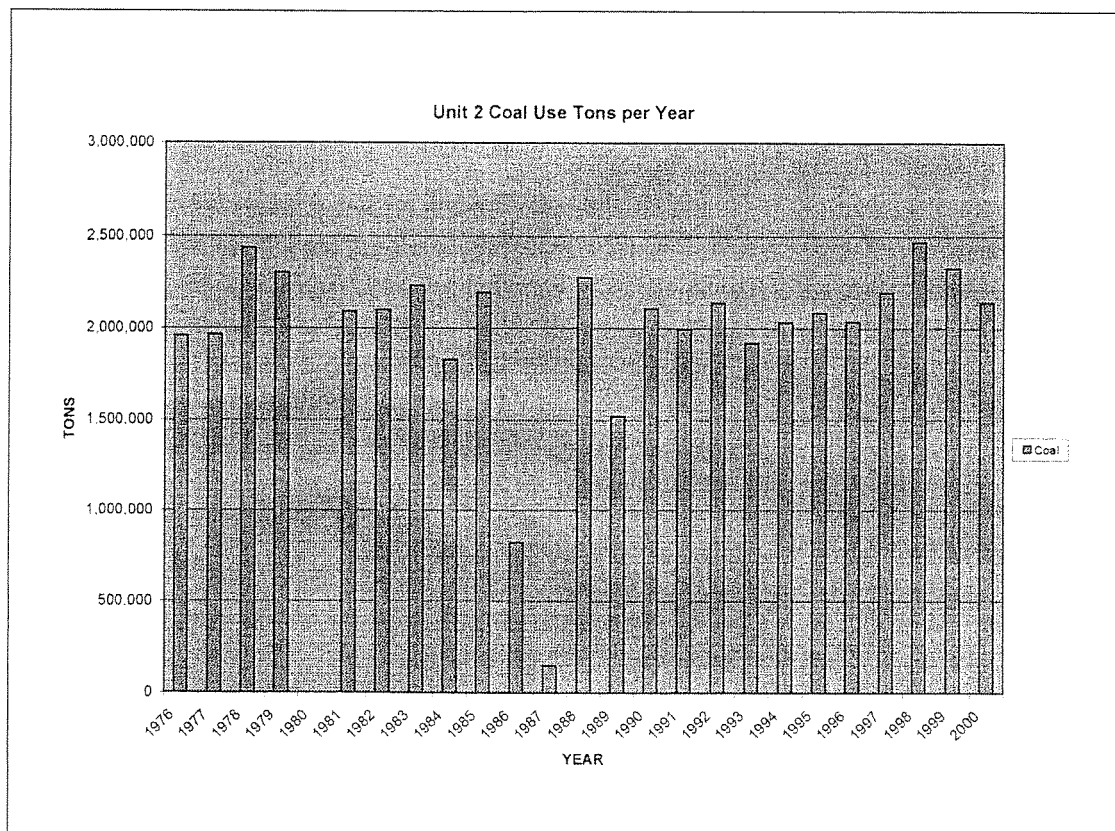


Figure 13

It is evident that the average sulfur in the fuel at LOS was anomalously low during 1976-1977. Coal has varied in sulfur content from the different mines that have supplied LOS and within each mine. Coal use during 1976 and 1977 was relatively high at Unit 1 and somewhat lower at Unit 2, and in neither case can an "average" or "representative" period be discerned. The data from which "representative" periods of operation might be discerned show no "representative" sulfur levels or coal consumed, leaving no satisfactory basis for estimating "representative emissions" from historical data, much less for the shorter periods of time modeled for which potential increment consumption problems may be presented.

NDDH notes that "potential to emit" may be used "if little or no operating data are available," as in the case of a source that has not yet operated. Basin Electric believes that the most appropriate emissions baseline for LOS is source-specific allowable emissions, and that those are representative of what LOS was designed and planned to emit. However, Basin Electric also believes that there is little or no operating data for emissions estimation during the period in question, and that it is insufficient to base emission estimates for a purpose as important as retroactive emission control calculation. In those circumstances, Basin Electric would have no objection to the use of "potential to emit" to estimate the emissions included in the baseline concentration or those for the period 1976-1977.

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In no event should 1976-77 be used as the baseline period, because that period was not representative of typical operations. If the Department declines to use allowable or potential emissions as baseline emissions, one alternative would be to use 1978-79 as the representative baseline and the short-term emission rates in Figures 6 and 7 and Exhibit I as baseline emissions.

Question 4. Not Applicable.

Question 5. Please provide the emission rates (lb/hr) which you believe are the baseline emission rates for your units on a 3-hour, 24-hour and annual basis and any supporting documentation.

Basin Electric submits that, for the reasons set forth above, its allowable emission rates contained in its permits for LOS Units 1 & 2 are the baseline emission rates. Those rates are 6,930 lb/hr (3-hr rolling average) for LOS Unit 1, 13,668 lb/hr (3-hr rolling average) for LOS Unit 2, and 3.0 lb/MMBTU for both units.

V. Treatment of Increment-Expanding Sources.

In its Draft Technical Support Document for the Proposed 2000 SIP Call ("TSD"), EPA stated that the five increment-expanding sources in North Dakota should be modeled, for the three-hour and 24-hour averaging periods, using the annual average operating rate during the baseline period, rather than peak operating rates or maximum short-term emission rates. Basin Electric understands that, despite its initial intent to use maximum rates, the NDDH followed EPA's recommendation when modeling for the Milton R. Young Station permit. We also understand that the NDDH intends to use the same approach for its proposed Class I modeling.

Basin Electric believes the EPA's recommended approach is erroneous, and conflicts with existing precedent, including EPA's own guidance. EPA acknowledged in the TSD that its own Draft New Source Review Workshop Manual (October, 1990) ("NSR Manual") supports the use of maximum short-term emissions. The NSR Manual provides:

"For each short-term averaging period (24 hours or less), the change in the actual emissions rate for the particular averaging period is calculated as the difference between:

- . the current maximum actual emissions rate, and
- . the maximum actual emissions rate as of the minor source baseline date..."

EPA's recommendation to the NDDH directly contradicts the methodology prescribed by EPA's own manual. The justification offered by EPA was that using peak short-term emission rates would overestimate increment expansion because it is extremely unlikely the sources were operating at peak levels at the time of worst meteorology. EPA's justification would apply a double standard. For increment-expanding sources, EPA seeks to avoid modeling which combines highest emission rates and worst-case

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meteorology. However, for increment-consuming sources, it requires that highest emission rates be modeled in combination with worst-case meteorology, even if the two are extremely unlikely to be combined in reality.

Basin Electric submits that EPA's double standard is very unfair and has no basis in law or logic. If EPA were prepared to authorize the use of annual average emission rates for modeling short-term increment consumption by increment-consuming sources, its instruction to do so for increment-expanding sources would be fair. Otherwise, EPA and the NDDH should follow the rules in EPA's NSR manual and use maximum short-term emission rates to model increment-expanding sources.

Basin Electric appreciates the opportunity to respond to NDDH's request for information and to provide its views on the important issues presented by EPA's threat of a SIP call. It also appreciates the careful and thorough work that NDDH has devoted to this issue. Basin Electric strongly believes that a careful review of applicable law and evidence leads to the conclusion there is no significant deterioration to justify a SIP call or comparable state action. We rely on NDDH's sound discretion in making a determination on that issue.

Sincerely,

/s/

Deborah Levchak
Staff Counsel

dfi/mw

Enclosures

cc: Frances Schwindt
Lyle Whitham
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